

## Injury among Residents of Pima County, Arizona 2005

Injury is a public health problem that impacts the lives of thousands of Arizona residents each year. Chronic pain, disability, large medical bills, changes in quality of life, and premature death are just some of the possible effects of injuries. These effects can extend beyond injured individuals to their families and communities. With non-fatal injuries, family members are often required to provide care, which can result in time away from work, loss of income, and increases in stress within the family. At the community level, the financial burden of injuries can include medical expenses, rehabilitation, lost wages, and lost productivity. Most injuries are predictable and preventable. Understanding the causes of injury is an important step toward reducing injury-related morbidity and mortality.

The following report identifies the leading causes of injury among residents of Pima County in 2005. This report is intended to be used as a guide for strategy development, program implementation, and evaluation. The Arizona Department of Health Services Injury Prevention Program operates under the vision of reducing injuries in Arizona using integrated surveillance and evidence-based interventions. This report was generated to increase awareness of county-specific injury issues and to facilitate opportunities for effective injury prevention activities.

**Figure 1. Injury Pyramid for Pima County Residents, Arizona 2005**

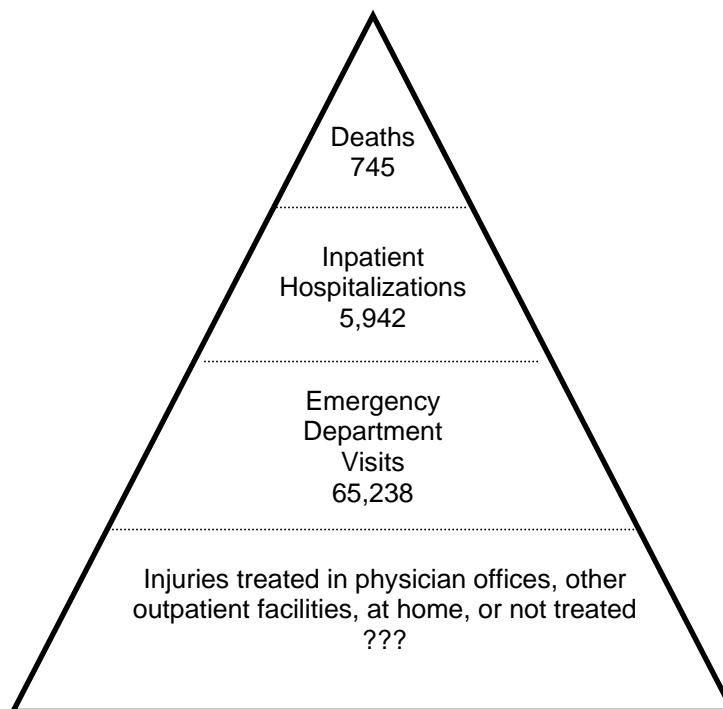


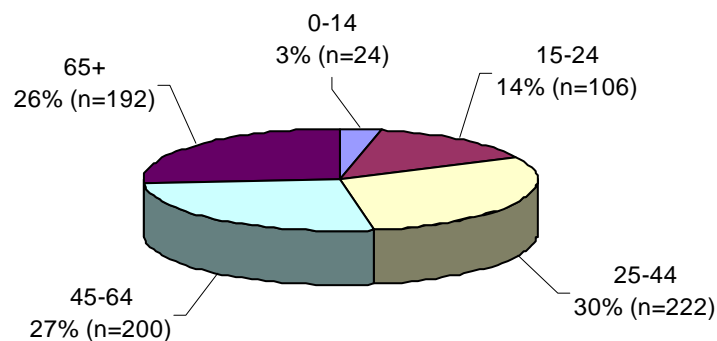
Figure 1 shows an injury pyramid for residents of Pima County during 2005. This pyramid shows that deaths represent the smallest proportion of injuries. The proportions increase towards the foundation of the pyramid, which is comprised of

hospital discharges, emergency department visits, and self care. Although injuries that do not require medical treatment may be the most numerous, no existing datasets capture these types of injuries.

## Deaths

In 2005, there were 745 injury-related deaths in Pima County. Most of these deaths were among males (65 percent, n=481), and females accounted for 35 percent (n=264). The largest percentage of deaths was among individuals ages 25 to 44 years (30 percent, n=222). Age distributions are shown in Figure 2.

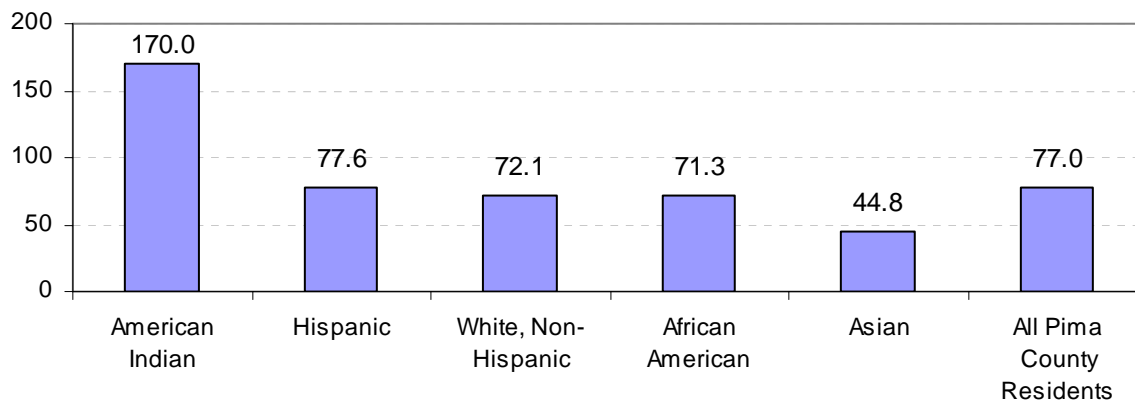
**Figure 2. Injury-Related Deaths by Age Group,  
Pima County, Arizona 2005 (n=745)**



Does not include 1 male with missing age

The highest injury-related death rate was among American Indians, with a rate of 170.0 deaths per 100,000 Pima County residents. Hispanics had an injury-related death rate of 77.6 per 100,000 residents. Figure 3 shows the age-adjusted death rates per 100,000 by race/ethnicity.

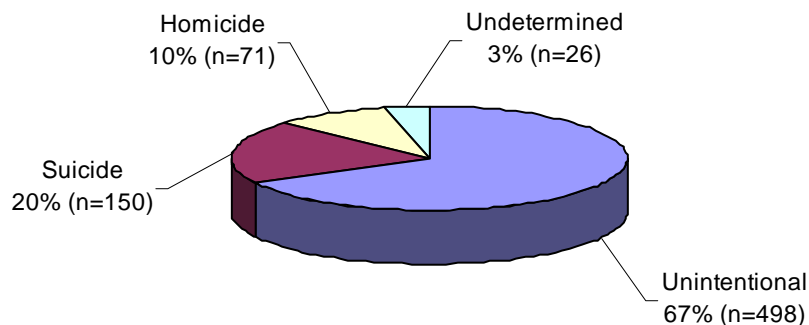
**Figure 3. Age-Adjusted Injury-Related Death Rates per 100,000 by Race/Ethnicity, Pima County, Arizona 2005 (n=745)**



Does not include 1 male with missing age

Unintentional injury is the leading cause of death among individuals ages 1 to 44 years in Pima County and in the state of Arizona as a whole.<sup>1</sup> Sixty-seven percent of injury-related deaths in Pima County were due to unintentional injuries (n=498); 20 percent were suicides (n=150); 10 percent were homicides (n=71); and 3 percent were of undetermined intent (n=26). Figure 4 shows injury-related deaths by intent.

**Figure 4. Injury-Related Deaths by Intent, Apache County, Arizona 2005 (n=745)**



<sup>1</sup> Arizona Health Status and Vital Statistics 2005.

## *Pima County Injury-Related Deaths Compared to Other Arizona Counties*

Table 1 shows the intent of injury-related deaths for residents of Pima County compared to residents of the rest of Arizona. The leading intent of injury-related deaths was unintentional for both Pima County and the remaining counties, accounting for the majority of injury-related deaths. Pima County and the rest of Arizona had similar percentages of suicides and homicides.

<b>Table 1. Intent of Injury-Related Deaths, Pima County Compared to Other Arizona Counties, 2005</b>			
Pima County (n=745)		Arizona, excluding Pima County (n=3,845)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	67	Unintentional	65
Suicide	20	Suicide	20
Homicide	10	Homicide	11
Undetermined	3	Undetermined	4

### *Suicide*

Males accounted for the majority of suicides in Pima County (73 percent, n=109), while females accounted for 27 percent (n=41). Sixteen percent of suicides were among individuals ages 10 to 24 years (n=24); 67 percent were among individuals ages 25 to 64 years (n=101); and 17 percent were among individuals 65 years and older (n=25). The most common cause of suicide was firearms (54 percent, n=81).

### *Homicide*

Males accounted for the majority of homicides in Pima County (86 percent, n=61), while females accounted for 14 percent (n=10). Six percent of homicides were among individuals ages 14 years and under (n=4); 35 percent were among individuals ages 15 to 24 years (n=25); 41 percent were among individuals ages 25 to 44 years (n=29); and 18 percent were among individuals 45 and older (n=13). The most common cause of homicide was firearms (70 percent, n=50).

### *Unintentional Injury*

The most common causes of unintentional injury-related deaths in Pima County were motor vehicle traffic crashes (30 percent, n=148) and poisoning (29 percent, n=144). The causes of unintentional injury-related deaths during 2005 in Pima County are shown in Table 2.

<b>Table 2. Causes of Unintentional Injury-Related Deaths among Pima County Residents, Arizona 2005</b>		
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Motor vehicle traffic	148	30%
Poisoning	144	29%
Fall	121	24%
Other/unspecified	52	10%
Suffocation	13	3%
Drowning	12	2%
Nature/environment	8	2%
<b>Total</b>	<b>498</b>	<b>100%</b>

### Motor vehicle traffic crashes

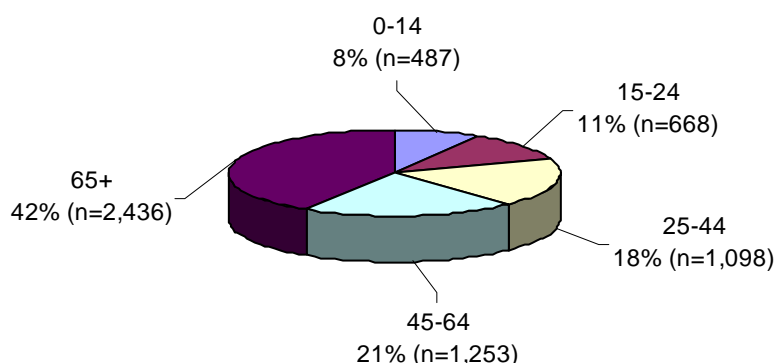
Males accounted for 72 percent of unintentional motor vehicle traffic-related deaths (n=106) and females accounted for 28 percent (n=42). Three percent of these deaths were among children 14 years and under (n=5); 23 percent were among individuals ages 15 to 24 years (n=34); 62 percent were among individuals ages 25 to 64 years (n=91); and 12 percent were among individuals 65 years and older (n=18).

For most of the motor vehicle traffic-related deaths, the location of the injured person was not specified on the death certificate (55 percent, n=81). Twenty-nine deaths were motorcyclists (19 percent); 27 deaths were pedestrians (18 percent); seven deaths were motor vehicle occupants (5 percent); and four deaths were pedal cyclists (3 percent).

### **Non-Fatal Inpatient Hospitalizations**

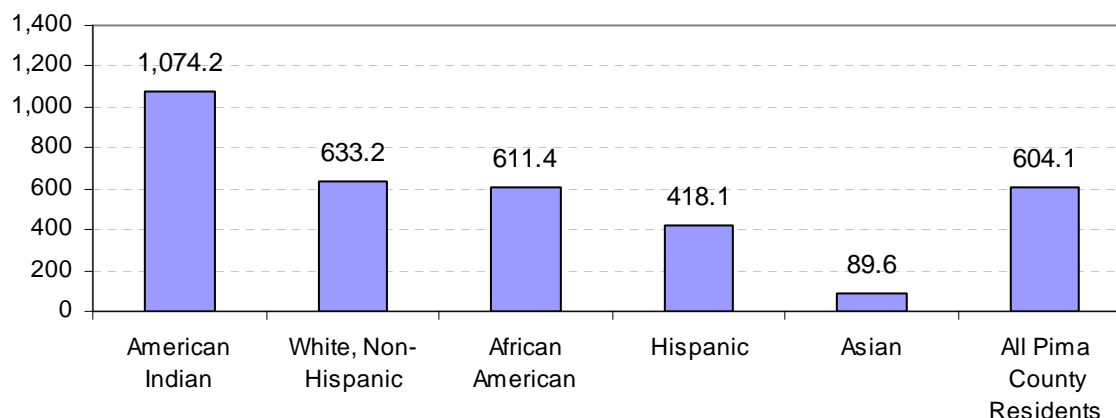
In 2005, there were 5,942 non-fatal inpatient hospitalizations due to injury among residents of Pima County. Forty-seven percent were male (n=2,815) and 53 percent were female (n=3,127). Forty-two percent of the hospitalizations were among individuals 65 years and older (n=2,436). Figure 5 shows injury-related inpatient hospitalizations by age group among residents of Pima County.

**Figure 5. Injury-Related Inpatient Hospitalizations  
by Age Group, Pima County, Arizona 2005  
(n=5,942)**



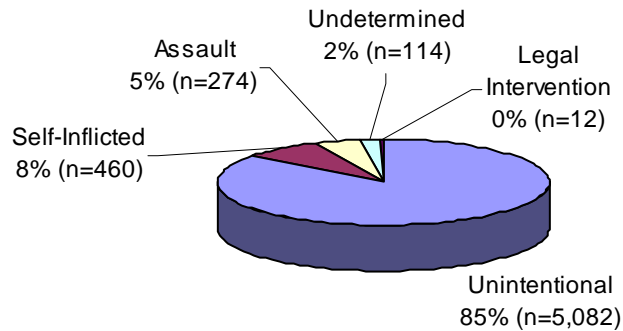
American Indian residents of Pima County had an injury-related inpatient hospitalization rate of 1,074.2 hospitalizations per 100,000 residents. Non-Hispanic Whites had the second highest rate with 633.2 injury-related hospitalizations per 100,000 residents. Figure 6 shows age-adjusted injury-related inpatient hospitalization rates by race/ethnicity.

**Figure 6. Age-Adjusted Injury-Related Inpatient  
Hospitalization Rates per 100,000 by Race/Ethnicity,  
Pima County, Arizona 2005 (n=5,942)**



Eighty-five percent of the inpatient hospitalizations were due to unintentional injuries (n=5,082); 8 percent were due to self-inflicted injuries (n=460); 5 percent were due to assaults (n=274); and 2 percent were of undetermined intent (n=114). There were 12 hospitalizations due to legal intervention. Figure 7 shows injury-related hospitalizations by intent.

**Figure 7. Injury-Related Inpatient Hospitalizations by Intent, Pima County, Arizona 2005 (n=5,942)**



*Pima County Injury-Related Hospitalizations Compared to Other Arizona Counties*

Table 3 shows the intent of injury-related hospitalizations for residents of Pima County compared to residents of the rest of Arizona. The leading intent of injury-related hospitalizations was unintentional for both Pima County and the remaining counties, accounting for the majority of injury-related hospitalizations. Pima County and the rest of Arizona had similar percentages of hospitalizations due to self-inflicted injuries and assaults.

<b>Table 3. Intent of Injury-Related Inpatient Hospitalizations, Pima County Compared to Other Arizona Counties, 2005</b>			
Pima County (n=5,942)		Arizona, excluding Pima County (n=29,082)	
Intent	Percent of Total	Intent	Percent of Total
Unintentional	85	Unintentional	83
Self-Inflicted	8	Self-Inflicted	9
Assault	5	Assault	6
Undetermined	2	Undetermined	2

The most common causes of unintentional injury-related hospitalizations in Pima County were falls (55 percent, n=2,791) and motor vehicle traffic crashes (15 percent, n=749). Table 4 shows the causes of unintentional injury-related hospitalizations among residents of Pima County.

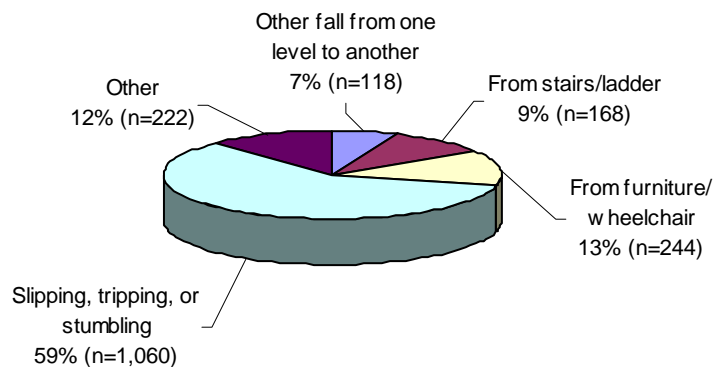
<b>Table 4. Causes of Unintentional Injury-Related Inpatient Hospitalizations among Pima County Residents, Arizona 2005</b>		
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Fall	2,791	55%
Motor vehicle traffic	749	15%
Other/unspecified	429	8%
Poisoning	385	8%
Nature/environment	134	3%
Struck by/against	125	2%
Motor vehicle non-traffic	122	2%
Overexertion	116	2%
Other pedal cycle	92	2%
Transport	84	2%
Cut/pierce	55	1%
<b>Total</b>	<b>5,082</b>	<b>100%</b>

## Falls

Males accounted for 33 percent of unintentional fall-related hospitalizations (n=934) and females accounted for 67 percent (n=1,857). Six percent of fall-related hospitalizations were among children 14 years and under (n=157); 3 percent were among individuals ages 15 to 24 years (n=74); 22 percent were among individuals ages 25 to 64 years (n=617); and 69 percent were among individuals 65 years and older (n=1,943).

For 35 percent of unintentional fall-related inpatient hospitalizations, information regarding contributing event was not specified in the hospital discharge database (n=979). Among the hospitalizations for which contributing event was specified, 59 percent were due to slipping, tripping, or stumbling (n=1,060). Figure 8 shows unintentional fall-related hospitalizations by contributing event.

**Figure 8. Inpatient Hospitalizations due to Unintentional Falls by Contributing Event, Pima County, Arizona 2005 (n=1,812)**

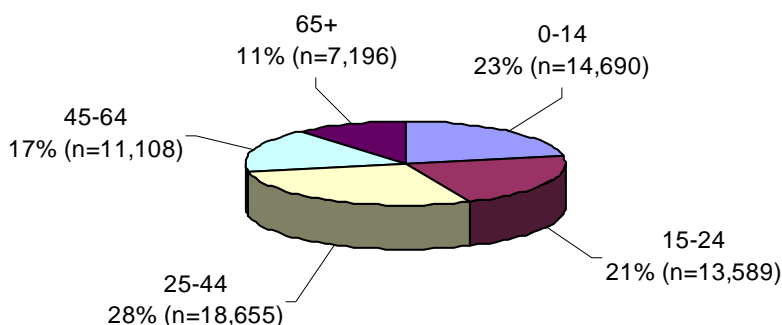




## Non-Fatal Emergency Department Visits

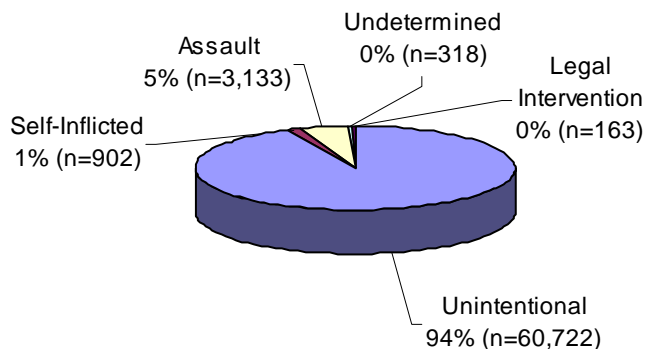
In 2005, there were 65,238 injury-related emergency department visits among residents of Pima County. Males accounted for 53 percent of these visits (n=34,463) and females accounted for 47 percent (n=30,774). For one individual, sex was not specified in the emergency department database. The largest percentage of visits was among individuals ages 25 to 44 years (28 percent, n=18,655). Figure 9 shows injury-related emergency department visits by age group.

**Figure 9. Injury-Related Emergency Department Visits by Age Group, Pima County, Arizona 2005 (n=65,238)**



Ninety-four percent of the emergency department visits were due to unintentional injuries (n=60,722); 5 percent were due to assaults (n=3,133); and 1 percent were due to self-inflicted injuries (n=902). There were 318 injury-related emergency department visits of undetermined intent and 163 visits were due to legal intervention. Figure 10 shows emergency department visits by intent.

**Figure 10. Injury-Related Emergency Department Visits by Intent, Pima County, Arizona 2005 (n=65,238)**



## *Pima County Injury-Related Emergency Department Visits Compared to Other Arizona Counties*

Table 5 shows the intent of injury-related emergency department visits in Pima County for residents of Pima County compared to residents of the rest of Arizona. The leading intent of injury-related visits was unintentional for both Pima County and the remaining counties, accounting for the majority of injury-related visits. Pima County and the rest of Arizona had similar percentages of visits due to self-inflicted injuries and assaults.

<b>Table 5. Intent of Injury-Related Emergency Department Visits, Pima County Compared to Other Arizona Counties, 2005</b>			
Pima County (n=65,238)		Arizona, excluding Pima County (n=313,433)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	94	Unintentional	94
Self-Inflicted	1	Self-Inflicted	1
Assault	5	Assault	4
Undetermined	0	Undetermined	1

The most common causes of unintentional injury-related emergency department visits were falls (29 percent, n=4,346) and struck by/against injuries (14 percent, n=28,660). Table 6 shows the causes of unintentional injury-related emergency department visits for Pima County residents in 2005.

<b>Table 6. Causes of Unintentional Injury-Related Emergency Department Visits among Pima County Residents, Arizona 2005</b>		
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Fall	17,258	28%
Struck by/against	8,647	14%
Motor vehicle traffic	8,508	14%
Other/unspecified	6,914	12%
Overexertion	6,164	10%
Cut/pierce	5,594	9%
Nature/environment	3,111	5%
Other pedal cycle	1,195	2%
Fire/hot object	1,048	2%
Poisoning	875	1%
Motor vehicle non-traffic	807	1%
Transport	311	1%
Machinery	290	1%
<b>Total</b>	<b>60,722</b>	<b>100%</b>

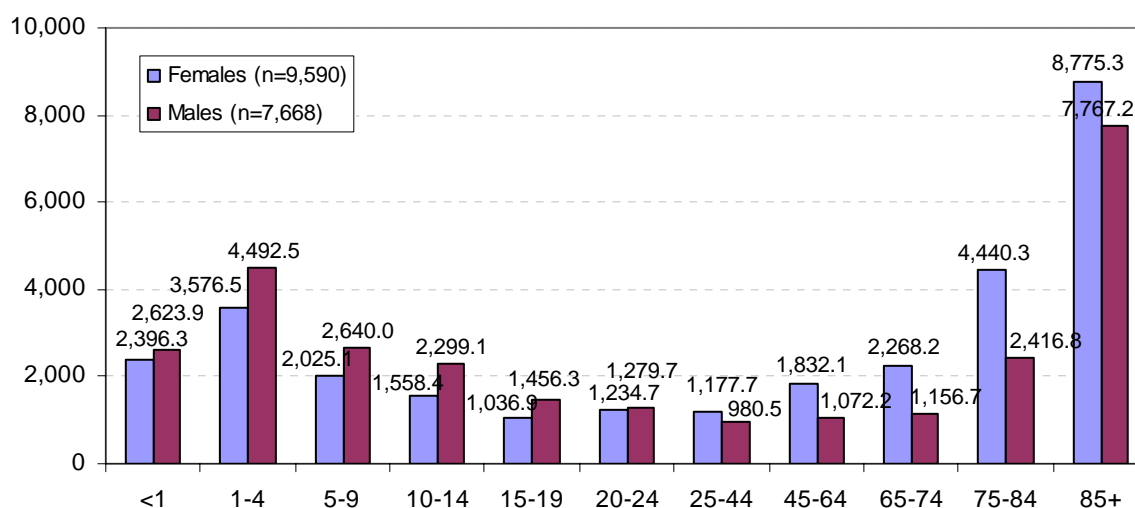
### Falls

There were 17,258 emergency department visits due to unintentional falls. Males accounted for 44 percent of these visits (n=7,668) and females accounted for 56 percent (n=9,590). Thirty percent of fall-related emergency department visits were among children 14 years and under (n=5,169); 10 percent of visits were among

individuals ages 15 to 24 years (n=1,791); 35 percent were among individuals ages 25 to 64 years (n=6,041); and 25 percent were among individuals 65 years and older (n=4,257).

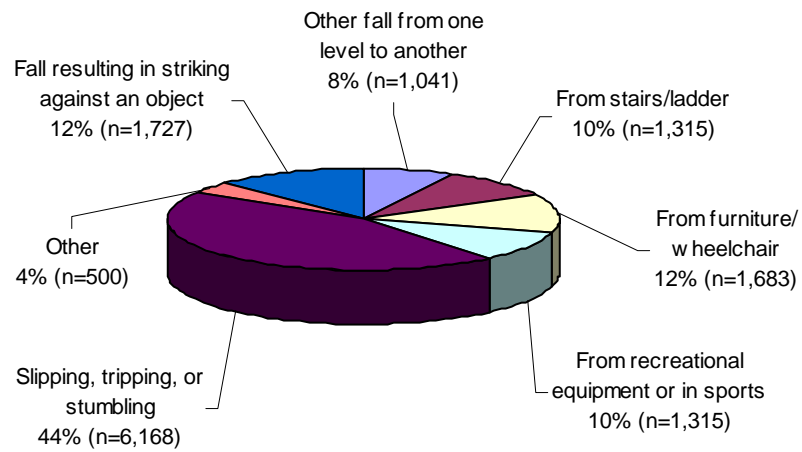
The highest rates of unintentional fall-related emergency department visits were among older adults. Females 85 years and older had a rate of 8,775.3 fall-related emergency department visits per 100,000 residents. Figure 11 shows emergency department visit rates of unintentional falls by age group and gender.

**Figure 11. Unintentional Fall-Related Emergency Department Visit Rates per 100,000, Pima County, Arizona 2005 (n=17,258)**



For 20 percent of the unintentional fall-related emergency department visits, information regarding contributing event was not specified in the emergency department database (n=3,509). Among the emergency department visits for which contributing event was specified, 44 percent of unintentional falls were due to slipping, tripping, or stumbling (n=6,168). Figure 12 shows emergency department visits due to unintentional falls by contributing event.

**Figure 12. Emergency Department Visits due to Unintentional Falls by Contributing Event, Pima County, Arizona 2005 (n=13,749)**



## Summary

In 2005, there were 745 injury-related deaths in Pima County, and the largest percentage of deaths was among adults ages 25 to 44 years (30 percent, n=222). The majority of these deaths were due to unintentional injuries (65 percent, n=498). The most common cause of unintentional injury deaths was motor vehicle traffic crashes (30 percent, n=148). For residents of Pima County, unintentional injury is the leading cause of death for individuals ages 1 to 44 years.<sup>1</sup> Twenty percent of injury-related deaths in Pima County were suicides (n=150); 10 percent were homicides (n=71); and 3 percent were of undetermined intent (n=26).

There were 5,942 non-fatal inpatient hospitalizations due to injury among residents of Pima County. Forty-two percent of the hospitalizations were among adults 65 years and older (n=2,436). Eighty-five percent of the hospitalizations were due to unintentional injuries (n=5,082); 8 percent were due to self-inflicted injuries (n=460); 5 percent were assaults (n=274); and 2 percent were of undetermined intent (n=114). Twelve hospitalizations were due to legal intervention. The most common cause of unintentional injury-related hospitalizations was falls (55 percent, n=2,791).

There were 65,238 injury-related non-fatal emergency department visits among residents of Pima County in 2005. The largest percentage of visits was among individuals ages 25 to 44 years (28 percent, n=18,655). Ninety-four percent of the emergency department visits were due to unintentional injuries (n=60,722); 5 percent were due to assaults (n=3,133); and 1 percent were due to self-inflicted injuries (n=902). There were 318 injury-related emergency department visits of undetermined intent and 163 visits were due to legal intervention. The most common cause of unintentional injury-related emergency department visits was falls (28 percent, n=17,258).

Source for deaths: 2005 Death Certificate Database

Source for hospitalizations: 2005 Inpatient Hospital Discharge Database

Source for emergency department visits: 2005 Outpatient Emergency Department Database

## Arizona Counties with Population, 2005

